23UECP13A — PROGRAMMING IN C

Time : Three hours   Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.

1. What are the facilities provided by preprocessor?

2. What is C programming?

3. What does static variable mean?

4. What is the use of typedef?

5. What is array?

6. What is the use of if statement in C?

7. What is recursion?

8. Differentiate formal argument and actual argument.

9. What is the pointer declarations used in C?

10. What are bit fields?

4206

SECTION B — (5 × 5 = 25 marks)

Answer ALL questions.

11. (a) Discuss the features of C language.

Or

(b) Write the steps for entering an executing a C program.

12. (a) What is type casting? Explain.

Or

(b) Describe the various types of constants used in C.

13. (a) Demonstrate the unconditional statements.

Or

(b) Write a C program to input marks of five subjects Physics, Chemistry, Biology, Mathematics and Computer, calculate percentage and grade according to given conditions: percentage > = 90%: Grade A, percentage > = 80% Grade B, percentage >= 70%: Grade C, percentage > = 60%: Grade D, percentage > = 40%: Grade E and percentage < 40% : Grade F.

14. (a) Explain the string handling functions.

Or

(b) Write a C program to add the given two matrices of order n × n.

15. (a) Discuss about the structure data type.

Or

(b) How do you define pointers? Explain its arithmetic operations.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Explain the structure of the C program with preprocessor redirectives.

17. Describe the different types of operators available in C.

18. Explain the looping statements with example code.

19. Explain user-defined functions in C.

20. Define a structure called "Student" with necessary fields to read a student mark information. Write a program to use the above structure to print marks statement for the given student with total, average, result and grade obtained in neat format.